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L11: Entry 5 of 5 File: USPT Jul 28, 1987

DOCUMENT-IDENTIFIER: US 4683531 A
TITLE: Polling method for data processing system

Detailed Description Text (9):
In polling an inactive microprocessor device, the program will start (block 140) (FIG. 7) by sending the poll message 115 (FIG. 8) (block 142) and start (block 144) a 256 msec timer (not shown). The program will then check for a response (block 146) to the poll message. If it fails to get a response before the 256 msec timer times out, it will check (block 148) if the time out is the first time out. If it is the first time out, it will repeat sending the poll message (block 142). If no response is received before the second time out, the program will check (block 150) to see if the polled device is an active device. If it is not, it will exit (block 152) back into the polling sequence. If the device is an active device, the program will update the poll table 106 (FIG. 9) by replacing the code designation FE with 00. If the polled device responds (block 146) within the first or second time out, the program will check the identity of the device (block 156). If it is an active device, it will exit (block 152) back into the polling sequence. If it is an inactive device, it will update the poll table 106 by replacing the code designation 00 with FE. Upon returning to the polling sequence, the program will check (block 158) (FIG. 6) to see if it is at the end of the poll table. If it is not, it will repeat the polling sequence of the active devices (FIGS. 5 and 6).

L4: Entry 16 of 85 File: USPT Dec 2, 2003

DOCUMENT-IDENTIFIER: US 6658595 B1
TITLE: Method and system for asymmetrically maintaining system operability

CLAIMS:

26. An asymmetric failure detection system, comprising: a first processing element operable to perform at least one function of a second processing element in the event the second processing element fails; and logic residing within the first processing element operable to expect and to receive keepalive inquiries at an expected rate from the second processing element and to send responses in response to the inquiries to the second processing element, the logic further operable to cause remedial action to be taken after not receiving any inquiries within a first predetermined time period; and wherein the first predetermined time period is larger than a second predetermined time period after which operation of the first processing element is disrupted if no responses to any inquiries are sent within the second predetermined time period; and wherein the first predetermined time period is determined based on an amount of time needed for the first processing element to cause remedial action to be taken, the first predetermined time period and the second predetermined time period selected to prevent simultaneous shutdown of both the first processing element and the second processing element in the event of a failure of the communication link.

32. An asymmetric failure detection system, comprising: a first processing element; logic within the first processing element operable to expect and to receive keepalive inquiries at an expected rate from a second processing element and to send responses to the inquiries, the first processing element further operable to cause remedial action to be taken after not receiving any inquiries within a first predetermined time period; and wherein the remedial action includes transmitting a message operable to disrupt the operation of the other processing element; and wherein the first predetermined time period is larger than a second predetermined time period after which operation of the first processing element is disrupted if no responses to any inquiries are sent within the second predetermined time period, and wherein the first predetermined time period is based on an amount of time needed for the first processing element to cause remedial action to be taken, the first predetermined time period and the second predetermined time period selected to prevent simultaneous shutdown of both the first processing element and the second processing element in the event of a failure of the communication link.

37. A method for asymmetric failure detection, comprising: receiving keepalive inquiries at an expected rate at a first processing element from a second processing element; sending responses in response to the transmitted inquiries; taking remedial action by the first processing element after failing to receive any inquiries within a first predetermined time period, wherein the first predetermined time period is based on an amount of time needed for the second processing element to take remedial action; and wherein taking remedial action includes transmitting a message operable to disrupt the operation of the other processing element; and disrupting the operation of the first processing element after a second predetermined time period that is smaller than the first predetermined time period if no responses to any inquiries are sent within the second predetermined time period, the first predetermined time period and the second predetermined time

period selected to prevent simultaneous shutdown of both the first processing element and the second processing element in the event of a failure of the communication link.

42. An asymmetric failure detector, comprising: a computer-readable storage medium; and an asymmetric failure detector resident on the computer-readable storage medium and operable to: receive keepalive inquiries at an expected rate at first processing element from a second processing element; send responses in response to the transmitted inquiries; take remedial action by the first processing element after not receiving any inquiries within a first predetermined time period; and wherein taking remedial action includes causing a message operable to disrupt the operation of the other processing element to be transmitted; and wherein the first predetermined time period is larger than a second predetermined time period after which operation of the first processing element is disrupted if no responses to any inquiries are sent within the second predetermined time period; and wherein the first predetermined time period is determined based on an amount of time needed to disrupt the operation of the first processing element, the first predetermined time period and the second predetermined time period selected to prevent simultaneous shutdown of both the first processing element and the second processing element in the event of a failure of the communication link.